

45. "Слёзы святого Йоргена", или как спустя 40 лет нашлись видеозаписи, фотоснимки и даже лунный грунт миссий "Аполлон".

13-16 minutes

When you read another heartbreaking story about how the missing Apollo 11 materials were suddenly found 40 or 50 years later, you recall some episodes from the satirical comedy of 1930 "The Feast of St. Jorgen". The film is set in a European country on the eve of the church holiday of St. Jorgen. The scammers Schultz and Korkis, seeing how much money ends up in the pockets of the clergy from alms, are planning to steal money from the ministers of the church. Schultz makes a duplicate key, lets Korkis into the church and locks the door, but, having caught the eyes of the police, is forced to pretend to be disabled. His accomplice, Korkis, has no choice but to pretend to be "St. Jorgen".



"St. Jorgen" heals the "invalid". A still from the film "Feast of St. Jorgen".

When it comes to the "tears of St. Jorgen" in the film, a parallel with the missing and suddenly found materials of the Apollo missions immediately suggests itself.

Let's compare the stories described by "NASA workers" and an episode from the movie. Three stories about missing materials from the Apollo missions immediately come to mind.

The first story tells about a yellow cardboard box lying somewhere in the table, and no one noticed it for 40 years (!). And only in 2017 they paid attention to it. It turned out that there were ... slides from the Apollo 15 lunar mission. What a find!

And although these images have already been published, but nevertheless, it turned out to be **ORIGINAL** film, real footage taken by astronauts on the Moon! (They are, however **original** films from the customized Hasselblad EDC (Electronic Data Cameras) medium format cameras used on the lunar surface, and include numerous images of the astronauts, the Lunar Module— the "Falcon" (LM-10), and Lunar Rover (LVR).



Yellow box with slides.

The box contained both rolls of film and individual slides.



Found slides.

The owner of these slides was a former NASA engineer.

He contacted a professional photographer, and he re-shot these slides with a modern digital camera.



Re-shooting of slide film with a digital camera.

The first thing that surprised the photographer was that the pictures were too blue. No one could really explain this fact, but among the commentators of the article, opinions were expressed that this could be somehow connected either with the fading of the films, or with the effect of strong ultraviolet radiation on the Moon.

Here, in fact, we have retold the entire article to you. [Original article.](#)

Since I worked for 10 years as the head of the Film Processing Shop at VGIK, I immediately understand the reason why the frames became too blue. I see that commentators, trying to find an answer, are hitting the wrong doors at all. I'll explain the real reason.

Let's draw your attention to the fact that perforations entered the frame during the reshoot. And the question immediately arises: why are the slides so blue, and the space behind the perforations is completely black? If color fading were the cause of color distortion, then the dyes would fade across the entire frame.

In addition, everyone who works with film and photographic materials is well aware that it is the blue dye that is destroyed in the first place. Because of this, old photographs take on a brownish brown color, but not blue. There is no black tone on old color photographs and films at all.



An old, faded photograph takes on a brownish tint.

True, now, with the help of modern graphic editors and programs attached to scanners, the image can be almost completely restored.



The photo is almost completely restored to its original color in Photoshop.

The fact that the slides from the Apollo 15 mission turned out to be blue indicates that an error occurred in the laboratory during color correction. The image that you take for a slide (ie, an image that is supposedly obtained in one stage on reversible film) is actually a positive, printed from a negative on a copier.

As a person who worked as the head of the film processing department for many years, and who knows all the stages of obtaining a negative-positive image, I will tell you the secret why the images turned out to be blue - it happened at the color grading stage.

Specialists of different professions work in the cinema laboratory. There were 25 people on the staff of the VGIK CPC, there were chemists, solution makers, mechanics for servicing equipment, electronics engineers and electricians. There are developers on the staff - they monitor the processing of the film in the developing machine.



Hall with two developing machines (VGIK film processing shop).

The material for development comes from a copy. Copiers load rolls of negative and positive film onto the printer, copy the image from negative to positive and transfer the exposed positives for development.

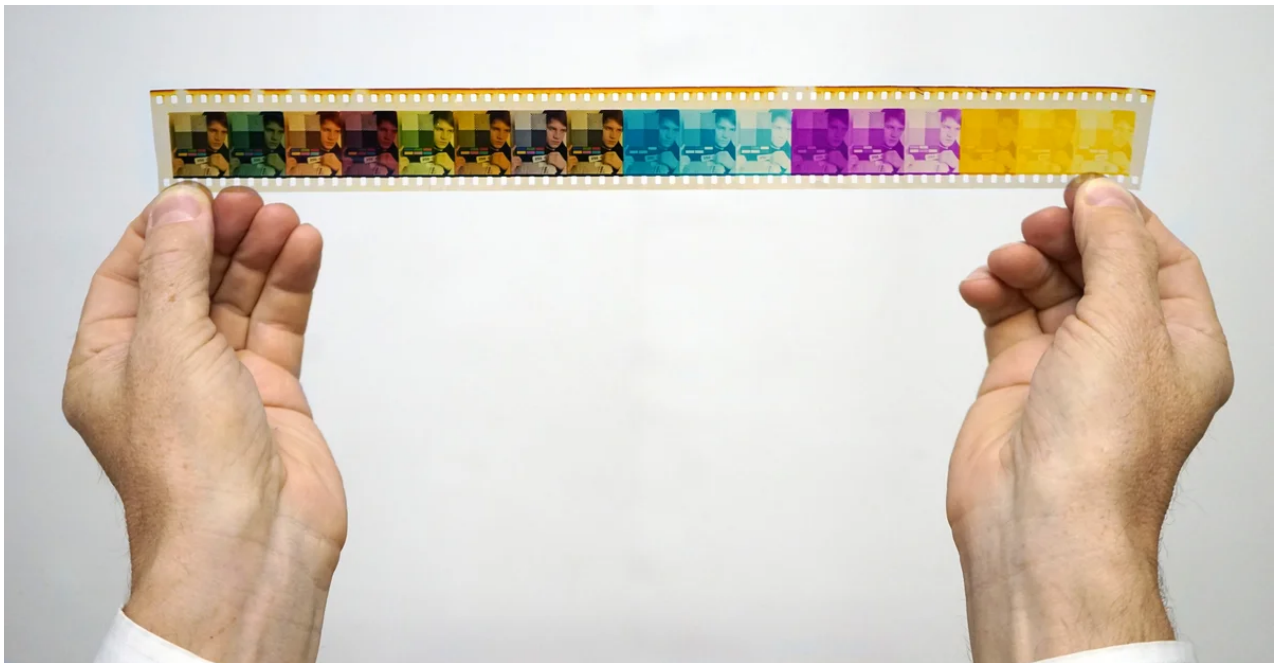


Copier near the copier (Gorky Film Studio).

And the negative from which the print will be made comes to them from the color setting.

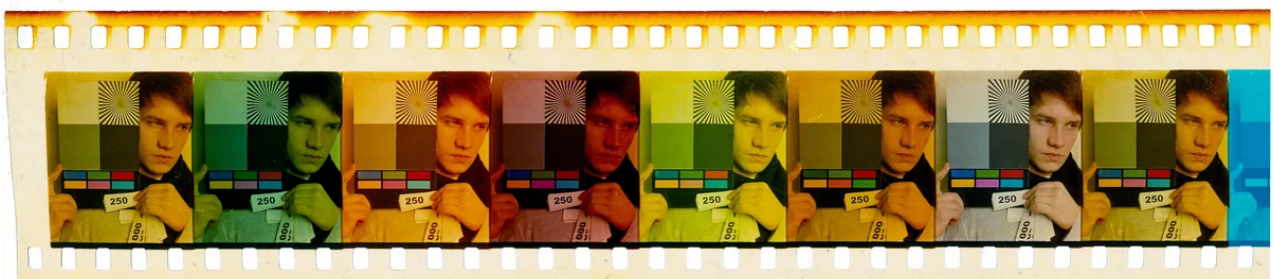
This is a very interesting profession - a color installer. It determines under what light conditions the negative should be printed. Before handing over the negative to the copier, the color installer fills out the light passport, which indicates the batch number of the positive film on which the negative is to be printed, the voltage on the lamp (for example, 115 volts), the print speed (for example, 180 FPM - feet per minute) and, most the main thing is the values of the light valves by zones (R, G, B).

During printing, you can change the color rendition to a very large extent. To determine the required values of the light valves (light numbers for the blue, green and red zones), first print "synex" - this is a preliminary test print of one negative frame on different light numbers.



Sinex for choosing the right color grading.

By combining the numbers of lights by zones, you can achieve a greater or lesser output of one or another dye - this leads to a change in the color tone of the image.



Color grading options.

The job of the color adjuster is precisely to achieve the optimal color balance in the positive. To do this (especially for scinex and color correction), scales with gray fields are placed in the frame, along which the excess of one or another color is clearly visible.

It is quite obvious to us that the excess blue color in the Apollo 15 frames occurred at the stage of color grading. Apparently it was a test print. The color installer saw that there was an excess of blue in the test print, made a correction and gave the go-ahead for mass printing. And this blue positive was thrown into the trash can, like a technical defect. So it was picked up by a NASA engineer.

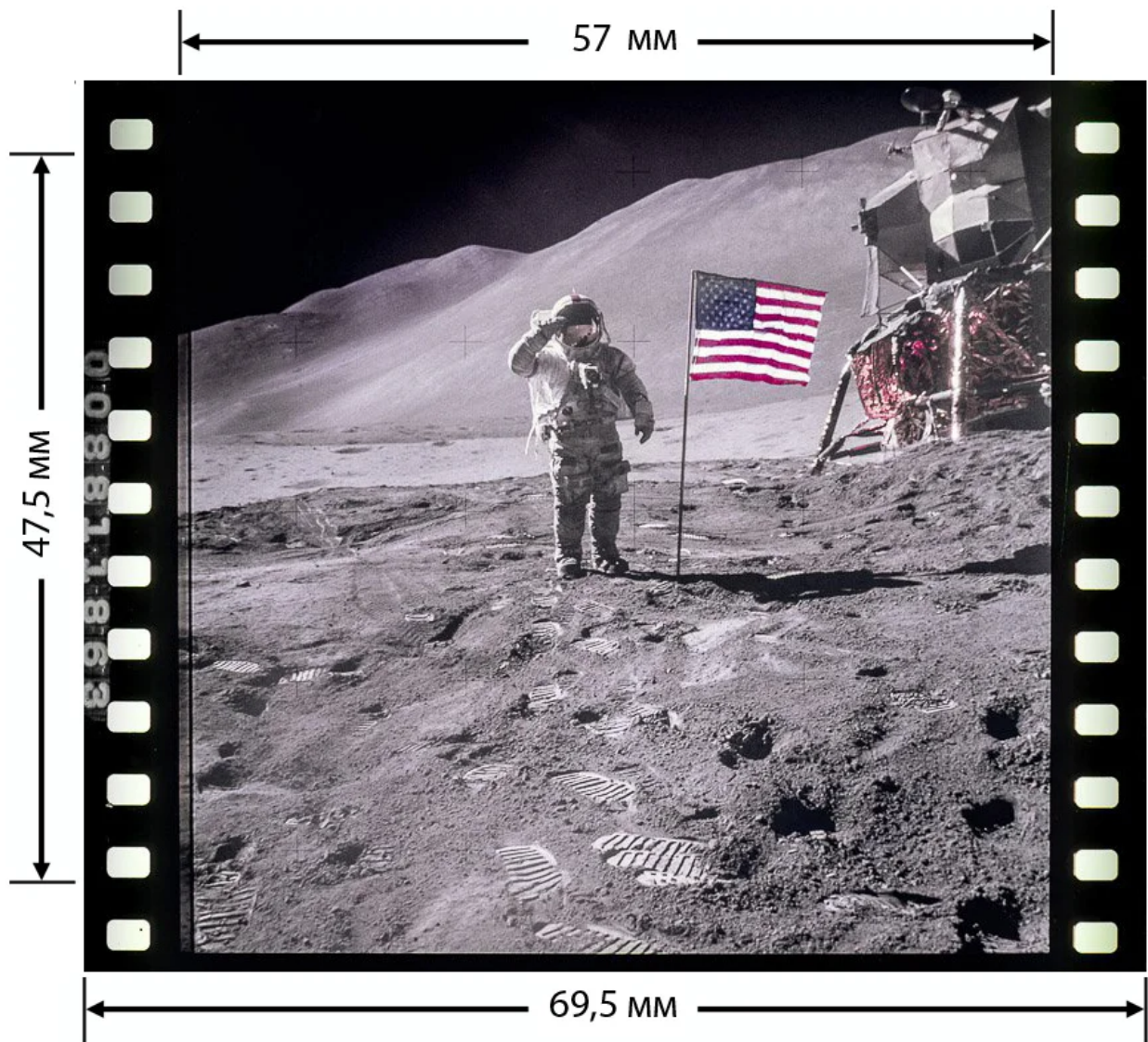
No, we do not force you to believe it. You can still consider that in front of you is a slide (reversible) film, on which a positive image is obtained in one stage - photographed, developed - and in your hands a ready positive. You can continue to believe that these images were taken with a camera on the moon. If you want to believe, believe. After all, we have not yet told you about the fact that simply shocked us in this "find".

According to official data from NASA, the size of the frame in the "lunar" camera "Hasselblad" was 53 x 53 mm. And in this "unique" find - the frame is larger in size, it is a square with a size of 57 x 57 mm. The difference is 9.2%.

We have carefully rechecked all dimensions again. The fact is that there is a constant on the film that has not changed for over 100 years. This is the size and pitch of the perforations.

As Edison once invented that 4 perforations per film frame is 19 mm, so it has survived to this day. If 4 perforations are 19 mm, then the pitch of one perforation is 4.75 mm.

Knowing that the distance from perforation to perforation in height is 4.75 mm, and this constant has not changed since 1894 for 125 years (keeping with a tolerance of no more than 0.02 mm), it is possible to accurately determine the size of the frame and the width of the film itself. Which is what we did. To reduce the error of our calculations, we took the height of 10 perforations in the photograph, it should be 47.5 mm, and compared it with the width of the film from edge to edge. The width turned out to be 69.5 mm, i.e. in fact 70 mm (as stated by NASA). It is possible that the very edges were "stabbed" during the reshoot. And the frame inside turned out to be 57 x 57 mm in size.



Real frame dimensions and film width obtained from the constancy of the perforation pitch.

To make a final conclusion what was wrong in this "find", we downloaded the same lunar frame from the official NASA website, its identifier AS15-88-11863, and placed it for comparison on 70-mm film with perforations.

What is the difference? First, it is immediately noticeable that the bottom frame (from the "find") is cropped from the right side. Not only the edge of the edge of the glass disappeared, clearly visible in the upper picture as a thin vertical line, but also as if a couple of millimeters of the image were cut off along with it on the right side. In fact, the scale of the image was not increased by 9%, but by 10%.



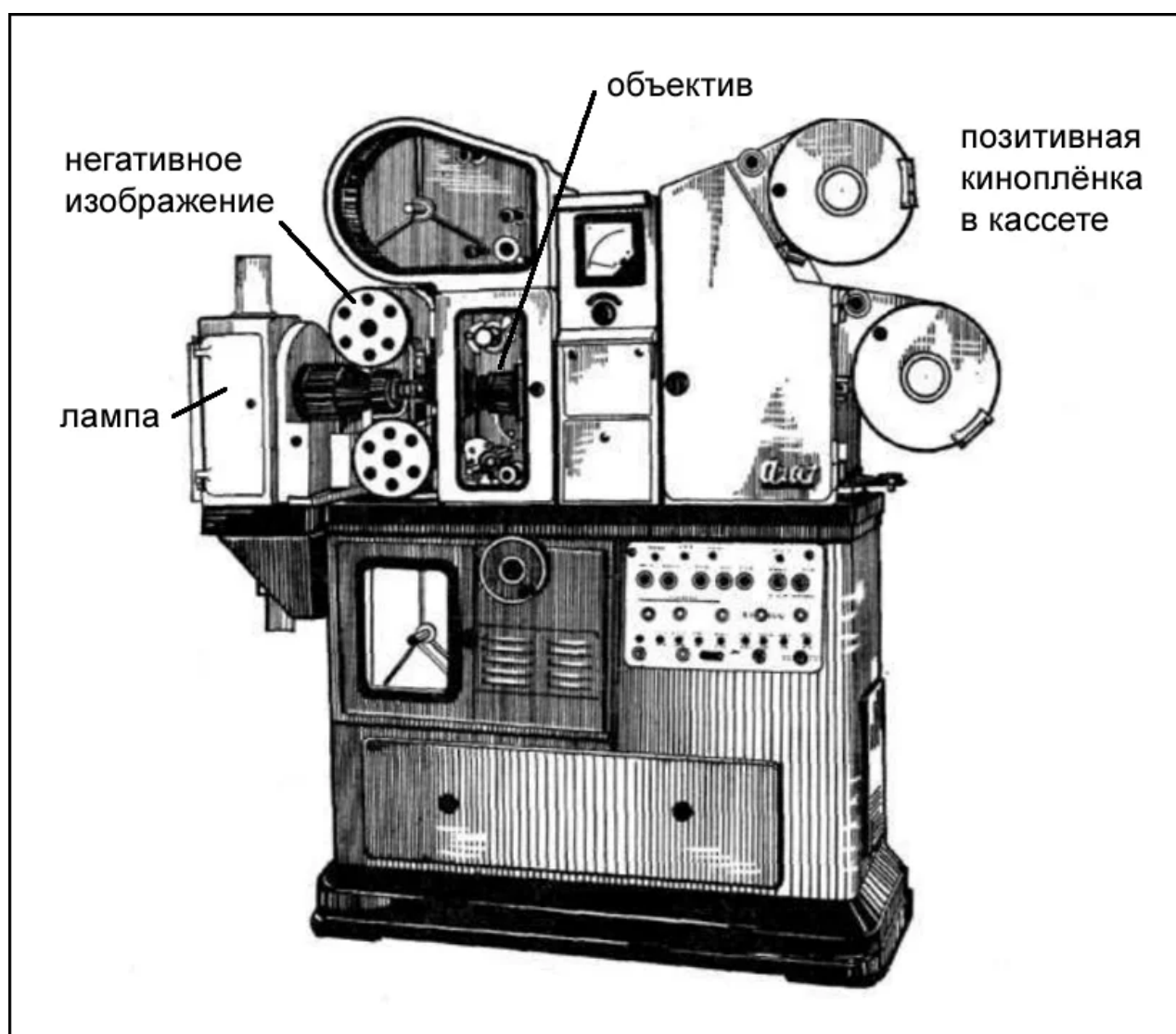
The same shot from the Apollo 15 mission. Top frame - This is what the original NASA frame should look like on 70mm film. Below is a reshooting of a frame from the found yellow box.

According to NASA legend, in Hasselblad, a glass plate with crosshairs every 10 mm was installed in front of the film, and this glass plate left shadows from the edges in the form of vertical lines on the left and right along the edge of the frame.

Secondly, with a frame size of 53x53 mm (top image), a black stripe formed between the column of perforations and the edge of the image, wider in width than the perforation (its width is 2.8 mm). This black strip could contain a number of perforations, left and right.

In the lower picture, the frame borders are quite close to the perforations. And thirdly, a difference of 10% in scale is clearly visible to the naked eye.

What has been kept in the yellow box for 40 years is not the originals taken during the lunar expedition, but rather inaccurate copies. A small part of the original image disappeared (the bar on the right), and the frame itself was 10% larger in scale. And this can only be if the image was printed onto the film by the projection method, through the lens, with a change in scale. Such a projection copier with a lens between the negative and the positive looks like this:



Optical printing apparatus for film laboratories.

In other words, the yellow box contained a copy that was poorly made in terms of color rendition and was of no value. In the desk of a NASA engineer (if such an engineer existed at all, and was not an invention of the screenwriter), not the original was stored, but an ordinary duplicate, something like a photocopy of a document. The value of this find is nil. As if I found in my desk ... a photocopy of a newspaper photograph.



Photo of the astronauts in the newspaper.

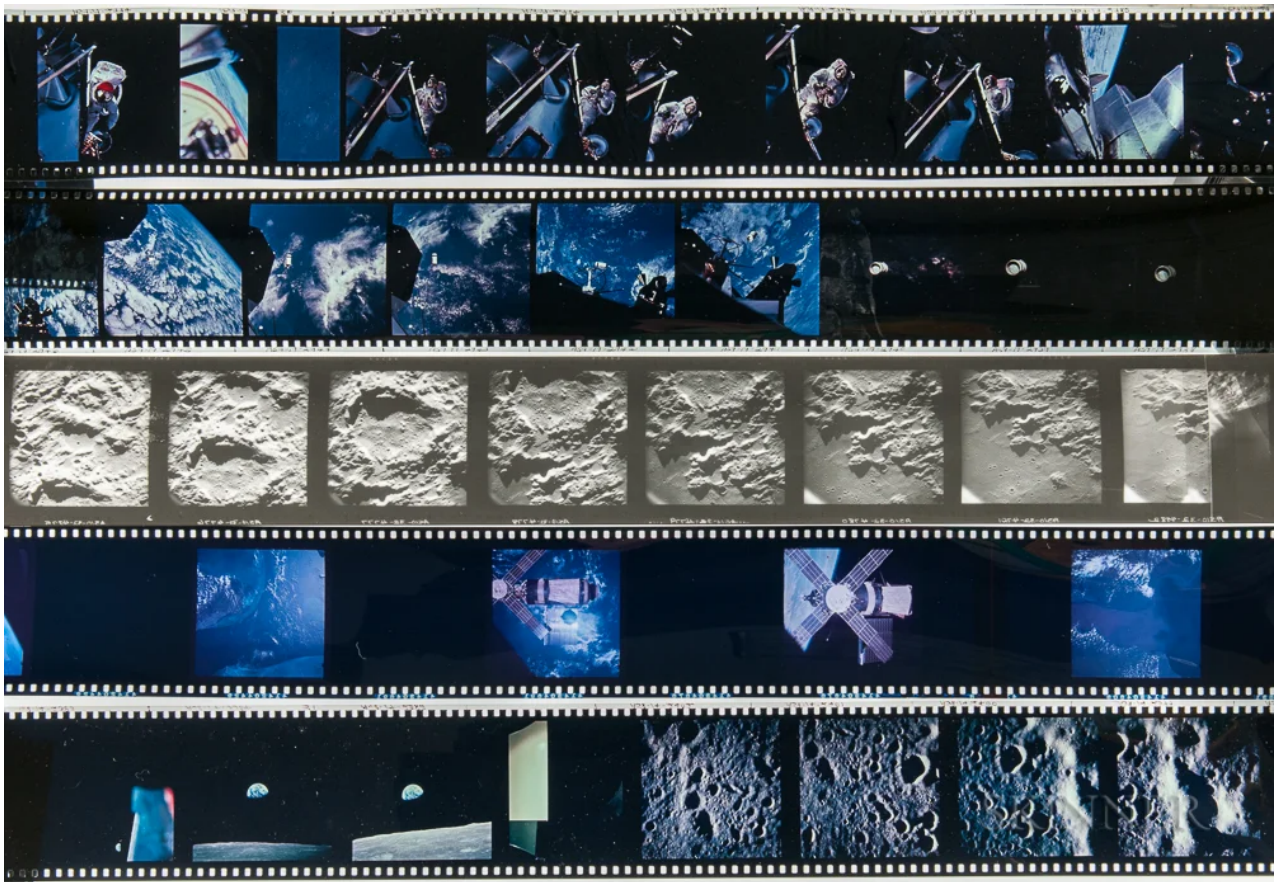
Just imagine - you made a copy from a newspaper photo (where the astronauts are) on a photocopier in 2019, setting the percentage of increase to 110%. You now have an enlarged photocopy. And you thought:

- What if I have in my hands a **unique** historical photograph, the only one of its kind, taken in 1969?

And they wrote an article about it, how 50 years later they found a unique picture in their desk.

In a randomly "found" yellow box, the image is not on reversible, but on positive film. And this is not a slide on Ektachrome (as NASA claims, with a sensitivity of 64 ASA), but a positive film on Eastman Print Film 5381, the sensitivity of which is only 1.5 units. ASA. This is the most common copy, obtained in a two-step way: "negative-positive".

You can print as many positives as you like from one negative. Therefore, it is not surprising that the former NASA engineer had copies of lunar images lying in his desk. These copies NASA made, if not thousands, then hundreds of copies from each cassette, and that's for sure. They are even sold (these copies) freely available on Internet sites for \$ 500 per batch, although the cost of making them is about 100 times lower than the indicated price. **These are just souvenirs.**



Copies of NASA comic images for sale on websites

[Announcement of the sale of souvenir products in the form of photographic films, link.](#)

What was kept in the box by the former NASA engineer was a color-defective copy rejected by the technical control department. They are completely blue, this is an obvious marriage. And besides, this is a remake, i.e. copies printed relatively recently.

And even when a representative of the Kodak company in documentaries shows the "originals" of the Apollo 11 mission, then these are not originals at all.



Arnold, an employee of the Kodak company (in 1966-1974), demonstrates the supposedly original video of 70-mm film from the Apollo 11 mission.

These are the same souvenirs with a frame size increased by 10%. The frame borders are close to the perforations.

And what does this have in common with the film "Feast of St. Jorgen"?

In the film, church workers sell to parishioners as a holy relic the hair of St. Jorgen,



then Jorgen's tear in the bottle.



And when the swindler Korkis enters the temple and opens the safe in the wall, he sees that a myriad of St. Jorgen's hair and tears are stored on the shelves.



So, the found unique footage of the Apollo 15 mission is the same "St. Jorgen's tears" - the usual mass souvenir products, the cost of which is a penny on a market day.

PS Continuation of stories about "accidentally" found in a writing desk lunar soil and "accidentally" found videos from "Apollo 11" - in the next article.

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Cameraman L. Konovalov was with you. Until next time!